### Soussion Scussion

Glenn Rakow – NASA GSFC SpaceWire Steering Committee Meeting ESA-ESTEC Noordwijk, Netherlands January 19, 2007

# SpaceFibre Future Missions

- Currently NASA has no planned missions using SpaceFibre
- Orion (CEV) has selected AS5643 (1394b)
- No backup plan to AS5643 exists
- requirements that would require a data bus similar DOD has satellite missions with performance to SpaceFibre
- Data rate in Gigabit range
- NASA has supplied money to develop SpaceFibre
- 0.1 Full Time Equivalent (FTE) for FY07

### Proposed Additional High-Level Requirements

- Compatible with AS5643/1 being developed for Orion (CEV)
- Defines physical layer only
- SAE Aerospace Standard
- Active transformers for longer distances
- S400 Copper Media Interface Characteristics over Extended Distances
- Compatible with speed options of AS5643
- S100, S200, S300, S400, S800, S1600, S3200
- Can allow option for alternative rates as well?

#### Tades

- The high level trade study presented at 2006 MAPLD
- Many lower level trades examples:
- Coding definition
- Initialization sequence
- Continuous bit stream?
- Control code types
- Definition flow control
- How to synchronize state of receivers descrambler with the state of remote transmitter's scrambler?
- Power management
- Speed negotiation
- Etc.
- Frame types
- Frame size
- Error detection coding
- Error recovery
- Scrambling polynomial
- Htc

## Next Steps?

- for SpaceFibre to share ideas and develop Should we create separate working group concept?
- Monthly?
- Bi-weekly?
- Proposed meeting time
- 15:00 Europe/Amsterdam 9:00 U.S/Eastern
- U.S. Industry and other government agencies would like participate